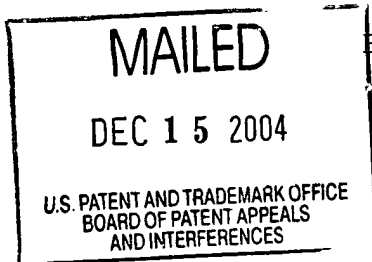


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE



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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte WARD B. BOWEN JR.  
and  
JERZY Z. MYDLARZ

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Appeal No. 2004-2011  
Application No. 09/919,239

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ON BRIEF

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Before KIMLIN, KRATZ and JEFFREY T. SMITH, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-23, all the claims pending in the present application. Claim 1 is illustrative:

1. A photographic element comprising a support bearing at least one radiation-sensitive silver halide emulsion layer comprising silver halide grains containing greater than 50 mole

percent chloride, based on silver, and having greater than 50 percent of their surface area provided by {100} crystal faces, wherein

(i) a first fraction which comprises from 10-90 wt% of the silver halide grains, based on total radiation-sensitive silver halide in the layer, consists of grains which have a central portion accounting for up to 99 percent of total silver which contains at least  $10^{-7}$  mole of a hexacoordination metal complex which satisfies formula (I) per mole of silver and less than  $10^{-10}$  mole of a hexacoordination metal complex which satisfies formula (II) per mole of silver, and

(ii) a second fraction which comprises from 10-90 wt% of the silver halide grains, based on total radiation-sensitive silver halide in the layer, consists of grains which have a central portion accounting for up to 99 percent of total silver which contains at least  $10^{-10}$  mole of a hexacoordination metal complex which satisfies the formula (II) per mole of silver and less than  $10^{-7}$  mole of a hexacoordination metal complex which satisfies the formula (I) per mole of silver:



wherein n is zero, -1, -2, -3 or 4,

M is a filled frontier orbital polyvalent metal ion, other than iridium, and

$L_6$  represents bridging ligands which can be independently selected, provided that at least four of the ligands are anionic ligands, and at least one of the ligands is a cyano ligand or a ligand more electronegative than a cyano ligand;



where T is a Os or Ru;

$E_4$  represents bridging ligands which can be independently selected;

$E'$  is E or NZ;

Appeal No. 2004-2011  
Application No. 09/919,239

r is zero, -1, -2 or -3; and

Z is oxygen or sulfur.

The examiner relies upon the following references as  
evidence of obviousness:

Newmiller	4,865,964	Sep. 12, 1989
Keevert, Jr. et al. (Keevert)	4,945,035	Jul. 31, 1990
Makuta et al. (Makuta)	5,683,853	Nov. 4, 1997
McDugle et al. (McDugle)	4,933,272	Jun. 12, 1990

Research Disclosure 437013, "Color paper with exceptional reciprocity performance," Section XIV (Sept. 2000)

Appellants' claimed invention is directed to a photographic element comprising a silver chloride emulsion layer having first and second fractions of different composition. The first fraction contains more of a hexacoordination metal complex of recited formula (I) whereas the second fraction contains more of a hexacoordination metal complex which satisfies recited formula (II). The metal complex of formula (I) is a speed enhancing dopant while the metal complex of formula (II) is a contrast improving dopant. According to appellants, by employing the two classes of dopants differentially in separate fractions of the silver halide grains, "improved LIK performance is achieved for optical and digital exposed elements" (page 2 of Brief, second

Appeal No. 2004-2011  
Application No. 09/919,239

paragraph). Appellants explain that "[l]atent image keeping (LIK) instability refers to a highly undesirable property of changing photographic performance as a function of the time that elapses between exposure and processing" (id.).

Appealed claims 1-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Makuta in view of Newmiller, McDugle and Keevert.

Appellants assert at page 3 of the Brief that "claims 1-18 may stand or fall as a single group" and "claims 19-23 may stand or fall as a single group." However, since appellants' separate argument for claims 19-23 relies on the arguments for the patentability of claims 1-18, all the appealed claims stand or fall together with claim 1.

We have thoroughly reviewed each of appellants' arguments for patentability. However, we are in complete agreement with the examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the examiner's rejections for the reasons set forth in the Answer, which we incorporate herein, and we add the following for emphasis only.

Appellants acknowledge in the specification and Brief that the hexacoordination metal complexes of claimed formulae (I) and (II) are known in the art as dopants for silver halide grains in photographic elements. This is evidenced by the patents to Keevert and McDugle. Appellants also state that they

do not contest that the combination of such references [Keevert and McDugle] may *prima facie* suggest to one of ordinary skill to combine an additive that provided high contrast but also decreased the speed (sensitivity) with an additive that would increase the speed to even out the sensitivity as suggested by the Examiner [page 6 of Brief, second paragraph].

Appellants submit that "[t]his is in fact what has been done in co-doped silver halide grains of the prior art as described at page 7 of the present specification" (*id.*). It is appellants' principal contention that it is the co-doping of the prior art that results in the LIK problem addressed by appellants, and appellants maintain that there is no teaching or suggestion in the prior art to employ the dopants independently in separate grain fractions of the emulsion.

Appellants' argument is not persuasive for more than one reason. First, we agree with the examiner that Newmiller evidences that it was known to blend emulsions of different type and that one or both of the emulsions may be doped differently

(see Newmiller at column 4, lines 9 et. seq., esp. lines 17-19). Hence, since Makuta cites Newmiller for disclosing the types of mixed grain emulsions that can be used in the silver chloride photographic emulsions of Makuta, we concur with the examiner that it would have been obvious to one of ordinary skill in the art that Makuta contemplated silver chloride mixed grain emulsions that have different compositions of dopants in separate fractions.

Also, appellants have not addressed the examiner's accurate finding that claim 1 on appeal, with which all the appealed claims stand or fall, encompasses first and second fractions that are hardly different in concentration. For instance, fraction one of the emulsion may contain  $10^{-7}$  mole of dopant (I) and fraction two may contain only slightly less than  $10^{-7}$  mole of dopant (I). Likewise, fraction one may contain slightly less than  $10^{-10}$  mole of dopant (II) whereas fraction two comprises  $10^{-10}$  mole of dopant (II). Hence, the examiner is correct in stating that "the presently claimed emulsion may actually comprise two fractions having virtually the same grains, thus only one type of grain and not two distinct fractions" (page 9 of Answer, penultimate full sentence). Accordingly, appellants' arguments

Appeal No. 2004-2011  
Application No. 09/919,239

are not commensurate in scope with the degree of protection sought by the appealed claims.

Also, as pointed out by the examiner, the claim language "less than  $10^{-10}$  mole" and "less than  $10^{-7}$  mole" for the first fraction and second fraction, respectively, includes a zero amount of dopant (II) and dopant (I) in the first fraction and second fraction, respectively. The examiner notes that the examples of the present specification support this claim interpretation, and the amounts of dopant (I) disclosed by Keevert and dopant (II) disclosed by McDugle fall within the claimed ranges for the first and second fractions.

As a final point, we note that appellants base no argument upon objective evidence of nonobviousness, such as unexpected results, which would serve to rebut the prima facie case of obviousness established by the examiner.


In conclusion, based on the foregoing and the reasons well-stated by the examiner, the examiner's decision rejecting the appealed claims is affirmed.

Appeal No. 2004-2011  
Application No. 09/919,239


No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

Edward C. Kimlin  
EDWARD C. KIMLIN  
Administrative Patent Judge

  
PETER F. KRATZ  
Administrative Patent Judge

BOARD OF PATENT  
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JEFFREY T. SMITH  
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Appeal No. 2004-2011  
Application No. 09/919,239

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